

C<sup>22</sup> structure by GC-MS (or HPLC-MS) analysis. For another example of such an assay, see Menhard and Zenk, *Phytochemistry* 50:763-774, 1999.

---

Please replace the Abstract at page 57, lines 2-4 with the following:

---

C<sup>23</sup> Transacylase enzymes and the use of such enzymes to produce Taxol<sup>TM</sup>, related taxoids, as well as intermediates in the Taxol<sup>TM</sup> biosynthetic pathway are disclosed. Also disclosed are nucleic acid sequences encoding the transacylase enzymes. Specific non-limiting embodiments include nucleic acid sequences encoding 10-deacetylbaccatin III-10-O-acetyl transferase.

---

**In the Claims:**

Please amend the claims as follows:

1. (Cancelled).

---

C<sup>24</sup> 3. (Amended). An isolated nucleic acid molecule comprising a nucleic acid sequence encoding the amino acid sequence shown in SEQ ID NO: 45.

---

4. (Amended). The isolated nucleic acid molecule according to claim 3, wherein the nucleic acid sequence comprises the nucleic acid sequence shown in SEQ ID NO: 44.

---

5. (Original). A recombinant nucleic acid molecule, comprising a promoter sequence operably linked to a nucleic acid molecule according to claim 3.

6. (Original). A cell transformed with a recombinant nucleic acid molecule according to claim 5.

---

8. (Amended). An isolated nucleic acid molecule that:

C<sup>25</sup> (a) hybridizes under very high stringency conditions with a nucleic acid sequence as set forth in SEQ ID NO: 44; and

(b) encodes a protein having transacylase activity, wherein the protein uses as a substrate a taxoid with a 10-hydroxyl group.

---

~~9.~~ (Cancelled).

10. (Original). A recombinant nucleic acid molecule, comprising a promoter sequence operably linked to a nucleic acid molecule according to claim 8.

11. (Original). A cell transformed with a recombinant nucleic acid molecule according to claim 10.

---

14. (Amended). An isolated nucleic acid molecule that:  
C26 (a) has at least 90% sequence identity with a nucleic acid sequence as set forth in SEQ ID NO: 44; and  
(b) encodes a protein having transacylase activity, wherein the protein uses as a substrate a taxoid with a 10-hydroxyl group.

---

~~16.~~ (Cancelled).

~~18.~~ (Cancelled).

~~23.~~ (Cancelled)

---

24. (Amended). An isolated nucleic acid molecule encoding a protein comprising an amino acid sequence selected from the group consisting of.

C27 (a) an amino acid sequence that differs from SEQ ID NO: 45 by one or more conservative amino acid substitutions; and

(b) an amino acid sequence having at least 90% sequence identity to the sequences specified in (a).

wherein the protein has transacylase activity and uses as a substrate a taxoid with a 10-hydroxyl group.

---

25. (Cancelled).